

Remarks/Arguments

The Office Action of November 27, 2009, has been carefully considered.

It is noted that Claims 20 and 21 are rejected under 35 U.S.C. 103(a) over the patent to Yoshikawa in view of the patent to Kohno.

Claims 22 is rejected under 35 U.S.C. 103(a) over Yoshikawa and Kohno, and further in view of the patent to Nagao et al.

Claim 25 is rejected under 35 U.S.C. 103(a) over Yoshikawa and Kohno, and further in view of the patent to Janos et al.

Claims 32, 33, and 35 – 38 are rejected under 35 U.S.C. 103(a) over Yoshikawa, Kohno and Janos et al., and further in view of the patent to Dantlgraber.

In view of the Examiner's rejections of the claims, applicant has amended Claim 20. Support for the amendment can be found at page 7, lines 20 – 24, and page 13, lines 15 – 21 of the specification.

It is respectfully submitted that the claims now on file differ essentially and in an unobvious, highly-advantageous manner from the constructions disclosed in the references.

Turning now to the references, and particularly to the patent to Yoshikawa, it can be seen that this patent discloses a die-cushion apparatus of a press machine. The presently-claimed invention recites a device for controlling a drawing process in a transfer press, in which a hydraulic load, specifically a differential cylinder, is selectively and intentionally acted upon with hydraulic medium from two different sources, namely a high-pressure accumulator and a low-pressure accumulator. It is always the same pressure chamber, namely the rod side chamber 15S of the cylinder 15, which is alternatively connected to the different pressure sources.

The patent to Kohno discloses a slide-driving device for presses. Kohno provides a hydraulic circuit for supplying rotary hydraulic machine, namely a variable displacement

motor/pump unit 302. A first accumulator stabilizes the pressure of the pressure source. The first accumulator is in constant connection with the inlet of motor/slash pump unit 302 (see col. 7, lines 19 – 23). A second accumulator is in constant connection with the outlet of the motor/pump unit 302, and stabilizes the pressure in the return path, together with the valves 222 and 224, at a very low value (5Kg/cm², see col. 8, line 15, about 75 psi), which is normally not considered a working pressure in the field of hydraulics.

The Examiner combined these references in determining that Claims 20 and 21 would be unpatentable over such combination. Applicant submits that the Examiner has not presented a *prima facie* case of obviousness. Kohno has no differential cylinder, but instead, a motor/pump unit. The motor/pump unit is a rotary drive instead of a linear drive. Furthermore, a motor/pump unit always has the same hydraulic-effective area at both the inlet and the outlet, while a differential cylinder has different areas. Additionally, and more importantly, in the circuit of Kohno, each accumulator is fixedly-connected to a different port of the hydraulic machine. In the presently-claimed invention, on the other hand, each accumulator is selectively and alternatively connected to the same port of the differential cylinder, namely the rod side. There is no teaching of this by Kohno.

Thus, Kohno always supplies the same pressure level for driving the motor/pump unit, while in stark contrast, the present invention allows a switching to the most suitable pressure source.

Furthermore, the objectives of Kohno and the present invention are different, namely, the circuit of Kohno is normally employed in hydraulics for maintaining a stable pressure difference across the motor/pump unit 302 so that a reliable control of the motor/pump unit is achieved (this is necessary since the pressure in the inlet and the outlet affects the performance of the motor/pump unit 302). The present invention, instead, has the aim of reducing energy waste by selecting a

source that has the correct pressure for the present stage of the control cycle, thereby avoiding throttling of surplus pressure. There is no teaching of this by the combination of references cited by the Examiner.

In view of these considerations, it is respectfully submitted that the rejection of Claims 20 and 21 under 35 U.S.C. 103(a) over a combination of the above-discussed references is overcome and should be withdrawn.

The references to Nagao, Janos, and Dantlgraber, have also been considered. Each of these references only recites standard hydraulic components for control options, without providing any teaching or suggestion for modifying a primary reference so as to teach the presently-claimed invention.

In view of these considerations, it is respectfully submitted that the rejections of Claims 22, 25, 32, 33, and 35 – 38, under 35 U.S.C. 103(a) are overcome and should be withdrawn.

Reconsideration and allowance of the present application are respectfully requested.

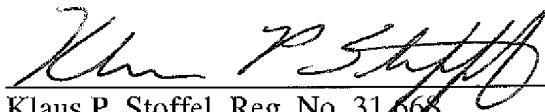
Fees

Other than the \$130 fee for the one-month extension, no fees are believed to be due. However, if any fee is determined to be due, authorization is hereby given to charge the fee to deposit account #02-2275. Pursuant to 37 C.F.R. 1.136(a)(3), please treat this and any concurrent or future reply in this application that requires a petition for an extension of time for its timely submission as incorporating a petition for extension of time for the appropriate length of time. The fee associated therewith is to be charged to Deposit Account No. 02-2275.

Respectfully submitted

LUCAS & MERCANTI, LLP

By:



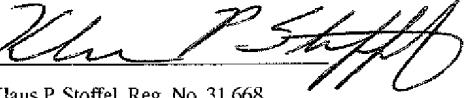
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